EGS CONFIDENCE TEST EXECUTION COVER SHEET

1.   Test ID and Title:ASTER Instrument Operations Confidence Test - EGS6

2.   Test Conductor / Test Lead: Steven War

3.   Planned Execution Date: _____

4.   Actual Execution Date: _____

5.   Planned Configuration:

Hardware: ASTER ICC, ASTER SDPS , ADN, P&S, Command Management, Telemetry & Command Processing, EDOS GSIF, WSGT/STGT Equipment, ASTER, EBnet, NCC, and EDOS LZPF

Software: S/W for above equipment

6.   "As Run" Configuration:

7.   Package items planned for execution:

        (List test cases or steps planned for execution, e.g. ICT10.1, ICT10.2 steps 2-5, etc.)

8.   Package items actually executed and deviations from currently published procedures.

9.   Results

        a.   Capabilities successfully demonstrated

        b.   Capabilities not successfully demonstrated

        c.   Requirements verified

        d.   Discrepancy Reports submitted

10.   Lessons Learned

ASTER Instrument Operations Confidence Test - EGS6

Background Information:

The ASTER Instrument Confidence Test will simulate a "Day in the life of ASTER" Operations. Accordingly, there will be a series of planned events for ASTER, and this plan will be modified to accomodate late changes. The modification will be made by the ASTER GDS, passed to the EOC, integrated into the plan, and be sent to ASTER via EDOS and EBnet.

Test Objectives:

Ensure ASTER GDS can operate ASTER through EOC. The ASTER GDS will submit baseline activity profiles, ad hoc activities, realtime commanding, and other ICC functions to EOC and the output from EOC will be checked to ensure EOC accurately generate the supporting command loads and ground scripts.
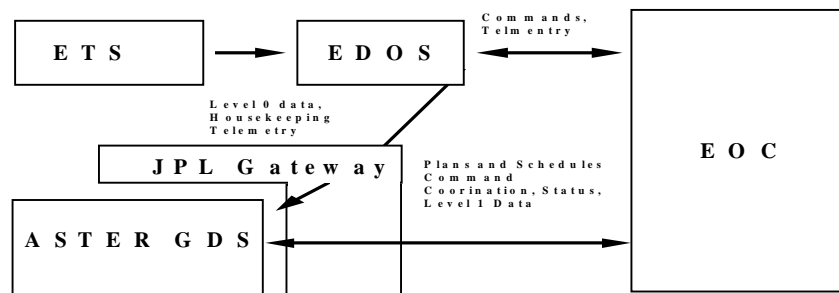
Requirements to be Verified:

ASTER-110#B ECS shall have the capability to send and ASTER GDS shall have the
capability to receive DARs for the ASTER instrument. DARs shall contain the following information, at a minimum:
    a. Observation number
    b. Experimenter identification
    c. Experimenter address
    d. Investigation identification
    e. Scientific discipline
    f. Observation repetition period
    g. Tolerance in observation time
    h. User priority
    i. Scheduling priority and target of opportunity flag
    j. Descriptive text
    k. Location data expressed in terms of longitude and latitude as earliest
    start coordinates and latest stop coordinates
    l. Earliest start time
    m. Latest stop time
    n. Minimum coverage required
    o. Maximum coverage desired
    p. Associated product generation request and product distribution request
    q. Pointing angle
    r. Calibration requirements
    s. Coordination requirements
    t. Data transmission requirements
    u. Illumination requirements (day/night)

v. Specific time of observation
w. Sun angle
x. Direct downlink option

Test Configuration:

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 ┌───────────┐          ┌───────────┐   Commands,      ┌───────────┐
 │   E T S   │ ───────▶ │  E D O S  │   Telmentry      │           │
 └───────────┘          └───────────┘ ◀──────────▶     │           │
                                                        │           │
              Level 0 data,                             │           │
              Housekeeping                              │    E O C  │
              Telemetry                                 │           │
          ┌──────────────────────┐  Plans and Schedules│           │
          │   J P L   G a t e w a y │ Command           │           │
          └──────────────────────┘   Coorination, Status,│         │
 ┌───────────────────┐              Level 1 Data        │           │
 │ A S T E R   G D S │ ◀──────────────────────────────▶ │           │
 └───────────────────┘                                  └───────────┘
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Participants and Support Requirements:

Participants:

      EDOS M&O
      ASTER M&O
      JPL M&O
      EOC M&O (FOT)
      EBnet M&O
      NCC
      SN
      ETS
      I&T Test Conductor

Comm:
      Voice: Phone

SCAMA and CCL Circuits
Data: EBnet circuit from EOC - ASTER GDS
(includes JPL Gateway & ADN)

Equipment & S/W:
      Hardware:
           ASTER SDPS
           ASTER ICC
           ADN
           P&S
           Command Management
           Telemetry & Command Processing
           EDOS GSIF
           WSGT/STGT Equipment
           ASTER
           EBnet
           NCC
           EDOS LZPF

      Software:
           S/W for above equipment

Test Tools: ETS

Test Data:

Description / Characteristics	Source	File/Script & Location
Plans, Schedules, and Coordination Messages	FOT / ASTER Instrument Team	
Housekeeping Data	Spacecraft simulator	
Return Link Data	Spacecraft Simulator	
EDOS Ground Message Header	Generated by EDOS	N/A
Real-Time Path Service EDUs	Generated by EDOS	N/A
CODA Report	Generated by EDOS	N/A
SCS Termination	Generated by EDOS	N/A
EDS	Generated by EDOS	N/A
Rate Buffered Path Service EDU	Generated by EDOS	N/A
Physical Media Unit Delivery Record	Generated by EDOS	N/A
PDS containing non science Path SDUs	Generated by EDOS	N/A
EDOS Archived PDSs	Generated by EDOS	N/A
Mission Test Data	TBS	

Operations Management Test Data	TBS	
Rate Buffered, PDS & EDS File Sizes	TBS	
Instrument Control Data	ASTER SDPS	
Instrument Operations Data	ASTER SDPS	
Instrument Support Analysis	ASTER SDPS	
Service Request	ASTER	
NOTE: Unsure if all of the following information belongs in this table, should be able to check the engineering data in these message to make sure the ASTER GDS information is being received and acted upon by ASTER		
VNIR (1) Observation Mode Science & Engineering Data		
VNIR (1) Calibration Mode Science & Engineering Data		
VNIR (1) Test Mode Science & Engineering Data		
VNIR (2) Observation Mode Science & Engineering Data		
VNIR (2) Calibration Mode Science & Engineering Data		
VNIR (2) Test Mode Science & Engineering Data		
SWIR Observation Mode Science & Engineering Data		
SWIR Calibration Mode Science & Engineering Data		
SWIR Test Mode Science & Engineering Data		
TIR Observation Mode Science & Engineering Data		
TIR Calibration Mode Science & Engineering Data		
TIR Test Mode Science & Engineering Data		
TIR Observation Mode Engineering Data		
TIR Calibration Mode Engineering Data		
TIR Test Mode Engineering Data		

References:

GSFC/MO&DSD, 510-ICD-EDOS/ASTER, ICD Between EDOS and ASTER GDS, January 19, 1996.

Test Case Descriptions:

EGS 6.1 Baseline Activity Profile

ASTER GDS will submit a nominal baseline activity profile to the EOC for integration
into the mission timeline. Supporting command loads and ground scripts will be
generated. The timeline will be executed and level 0 data will be returned from the EDOS
to the EDC DAAC and the ASTER GDS. Higher level data products on physical media
will be returned from the EDC DAAC to the ASTER Instrument Team (IT).

EGS 6.2 Ad Hoc Activities
ASTER GDS will submit a set of ad hoc activities to the EOC for integration into the
mission timeline. Supporting command loads and ground scripts will be generated. The
timeline will be executed and level 0 data will be returned from the EDOS to the EDC
DAAC and the ASTER GDS. Higher level data products on physical media will be
returned from the EDC DAAC to the ASTER Instrument Team (IT).

EGS 6.3 Baseline Activity Profile and Ad Hoc Activities
ASTER GDS will submit a nominal baseline activity profile and a set of ad hoc activities
to the EOC for integration into the mission timeline. Supporting command loads and
ground scripts will be generated. The timeline will be executed and level 0 data will be
returned from the EDOS to the EDC DAAC and the ASTER GDS. Higher level data
products on physical media will be returned from the EDC DAAC to the ASTER
Instrument Team (IT).

EGS 6.4 Realtime Time Commanding

ASTER GDS will send Realtime commands to the EOC, and the EOC will in turn send
them to EDOS who in turn routes them to the ETS via EBnet. These messages will be
checked to ensure the EOC has accurately sent the information the ASTER GDS
intended.

EGS 6.5 Integrated ASTER Instrument Operations Test

ASTER GDS will submit a nominal baseline activity profile and a set of ad hoc activities
to the EOC for integration into the mission timeline. Supporting command loads and
ground scripts will be generated. The timeline will be executed and level 0 data will be
returned from the EDOS to the EDC DAAC and the ASTER GDS. Realtime commanding
of ASTER from the ASTER GDS via the EOC will be exercised. Higher level data
products on physical media will be returned from the EDC DAAC to the ASTER
Instrument Team (IT).

Test Procedures:

Test Set-up:

Step	Station	Action	Expected Results	Comments
1.	EOC	Log onto the FOS user workstation and initialize necessary subsystems Record the system configuration on the execution cover sheet	FOS logical string is configured for test execution	
2.	EOC	Bring up event page		

(rest is TBS)

Test Execution:
TBS

EGS 6.1 Baseline Activity Profile

EGS 6.2 Ad Hoc Activities

EGS 6.3 Baseline Activity Profile and Ad Hoc Activities

EGS 6.4 Realtime Time Commanding

EGS 6.5 Integrated ASTER Instrument Operations Test

Test Termination:

Step	Station	Action	Expected Results	Comments
1.	EOC	Collect all necessary screen snaps, dumps, etc. needed for post-test analysis and verification		
2.	EOC	Reconfigure the system to pre-test configuration		
3.	EOC	Log off of the FOS user workstation		